

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000916**Date Inspected:** 04-Nov-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Lefeng**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower Mock-up and OBG**Summary of Items Observed:**

CALTRANS Quality Assurance (QA) Inspector, Alfredo Acuna was present for the fabrication scheduled for this project at the ZPMC facility in Shanghai, China for the San Francisco Oakland Bay Self Anchored Suspension Bridge.

Item Description	WBS	Dwg No.	Status
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1	89 Mock-up Assembly- MUB1		
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Welder Gou Den Yun was observed by the QA Inspector performing welding operations at the junction of web plate A to web plate B connection, joint # 55. Base metal was designated as A-709M HPS 485W. ZPMC was using the shielded arc welding (SMAW) process in the horizontal (2G) position with the 4 mm diameter electrode designated as E-9018M -H4R, brand name Excalibur. The photograph below shows ZPMC performing welding operation at the diaphragm for the 89M Mock-up.

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2 Welding the Flange Reinforcement ring SA-273 Tower Mock-up 77 M

The QA inspector observed welder Wang Bing performing welding operation with flux cored arc welding (FCAW) process at the flange reinforcement ring SA-273 splice weld joint # 5. The QA inspector performed random verifications of the welding parameters. The QA inspector found that welds appeared to be in accordance with the contract documents.

The photograph below shows Mr. Wang Bing performing welding operations.



3 Tower Mock-up 77 M Flange reinforcement ring SA-274

ZPMC positioned a portion of the flange reinforcement ring SA-274 at the bottom side of the diaphragm. ZPMC was checking the gaps between the flange and the diaphragm. See photograph below.



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4 OBG Bottom Plate

The QA inspector observed ZPMC performing fit-up operations at the bottom plate assembly panel 42A, BP12 at the junction of the Tee open ribs to the bottom plate. The QA inspector performed random dimensional verifications for the panel 42A, BP12. The QA inspector found that the dimensions appears to be in compliance with ZPMC shop drawings. The QA inspector had a conversation with ZPMC QA representative Fu Yu Hong. The QA asked Mr. Fu about the shrinkage allowance. Mr. Fu relayed that ZPMC was using shrinkage allowance of 0.5 mm between every transverse dimension and longitudinal the total length plus length/2000 (welding shrinkage allowance). See photograph below.



5 OBG Bottom plate Tees Drilling operations

The QA inspector observed ZPMC representatives performing drilling operations at the RS9C WT21x57. The QA inspector observed that ZPMC was using template with hardened bushings. See photograph below.



6 OBG Material Verification at the ZPMC cutting table Tower Mock-up

The QA inspector observed the material being cut at the Tower Mock-up shop was A-709M-345T2-X for the plate designated as X49-X49-D at the shop drawings. After verifying with the shop drawings, the QA inspector found that the material cut appeared to be in general compliance with the contract documents.

Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or

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remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Acuna,Alfredo	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer
